

WHAT IS CLAIMED IS:

1. A method for recording and reproducing information with respect to a recording medium, the recording medium including a data recording region which is defined to record information in a predetermined recording system and a first format, and an encryption data recording region in which encryption information required to reproduce data recorded in the data recording region is recorded in the recording system and a second format different from the first format,

said method recording information in the data recording region in the recording system and the first format; after encrypting the information to record using the encryption information which was reproduced in the recording system and the second format from the encryption data recording region in the recording medium, and

said method reproducing information by reading out the encrypted information recorded in the data recording region in the recording system and the first format, and by decrypting the encrypted information using the encryption information which was reproduced from the encryption data recording region in the recording medium in the recording system and the second

format.

2. A recording medium comprising:

a data recording region which is defined to record data in a predetermined recording system and a first format; and

an encryption data recording region in which encryption information required to encrypt information to be recorded in the data recording region and to reproduce recorded information from the data recording region is recorded in the recording system,

wherein the encryption information is recorded in the data recording region in a second format different from the first format.

3. The recording medium according to claim 2, wherein the data recording region is blank before information is recorded by user.

4. The recording medium according to claim 2, wherein the second format is adapted to reproduce information in a condition of better quality than that of the first format.

5. The recording medium according to claim 4,

wherein recording density of the second format is lower than that of the first format.

6. The recording medium according to claim 2, wherein the encryption information is recorded at the plural different positions in a circumferential direction on a disk which makes up the recording medium.

7. The recording medium according to claim 2, wherein the encryption information is set to be different in each recording medium.

8. The recording medium according to claim 2, wherein identification information for identifying each recording medium is recorded in the encryption data recording region.

9. The recording medium according to claim 4, wherein a modulation system of the first format is different from that of the second format.

10. The recording medium according to claim 4, wherein an error correcting system of the first format is different from that of the second format.

11. A recording and reproducing apparatus for recording and reproducing information with respect to a recording medium, the recording medium including a data recording region which is defined to record information in a predetermined recording system and a first format, and an encryption data recording region in which encryption information required to encrypt information to be recorded in the data recording region and to reproduce recorded data from the data recording region is recorded in the recording system, the encryption information being recorded in the data recording region in a second format different from the first format,

said recording and reproducing apparatus comprising:

reproducing means for reproducing information in the recording system and the first format, and in the recording system and the second format; and

sole recording means for recording information on the recording medium only in the recording system and the first format, but not in the recording system and the second format.

12. The recording and reproducing apparatus according to claim 11, wherein the second format is

adapted to reproduce information in a condition of better quality than that of the first format.

13. The recording and reproducing apparatus according to claim 12, wherein recording density of the second format is lower than that of the first format.

14. The recording and reproducing apparatus according to claim 12, wherein a modulation system of the first format is different from that of the second format.

15. The recording and reproducing apparatus according to claim 12, wherein an error correcting system of the first format is different from that of the second format.

16. A recording and reproducing apparatus comprising:

reproducing means for reproducing information recorded in a predetermined recording system and n kinds of format; and

sole recording means for recording information only in the recording system and m ( $1 \leq m < n$ ) format in the n kinds of format.

17. A method for manufacturing a recording medium, the recording medium including a data recording region which is defined to record information in a predetermined recording system and a first format, and an encryption data recording region in which encryption information required to encrypt information to be recorded in the data recording region and to reproduce recorded information from the data recording region is recorded in the recording system and a second format different from the first format,

said method comprising the steps of:

(1) detecting defects by recording and reproducing test data in the data recording region in the first format; and

(2) recording the encryption information in the encryption data recording region in the second format,

said step (1) and said step (2) being continuously carried out in one apparatus.

18. The method for manufacturing a recording medium according to claim 17, wherein recording density of the second format is lower than that of the first format.

19. The method for manufacturing a recording

medium according to claim 17, wherein the encryption information is recorded at the different plural positions in a circumferential direction on a disk which makes up the recording medium.

20. The method for manufacturing a recording medium according to claim 17, wherein the encryption information is set to be different in each recording medium.

21. The method for manufacturing a recording medium according to claim 17, wherein identification information for identifying each recording medium is recorded in the encryption data recording region.

22. The method for manufacturing a recording medium according to claim 17, wherein a modulation system of the first format is different from that of the second format.

23. The method for manufacturing a recording medium according to claim 17, wherein an error correcting system of the first format is different from that of the second format.

24. The method for manufacturing a recording medium according to claim 17, further comprising the steps of:

detecting the encryption information which is recorded in the encryption data recording region in the second format; and

re-recording the encryption information in case where the encryption information has not been recorded properly.